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**SCHOOLGIRLS WALK** a steep, cobbled path in Shaftesbury, one of countless British villages that survive unchanged amid the 20th century and its economic problems

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NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REVIS

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**THE SEA, always near by in Britain, brings ocean-going ships up the Thames River as far as London's Tower Bridge. Farms like the one below, though small in acreage, produce yields seldom matched in United States, Canada.**

© REECE WINSTONE

flowed into Britain from carefully guarded Middle East oil fields.

Look at the picture today. World War II throttled Britain's trade, smashed billions of dollars worth of ships, factories, equipment. The Middle East is a troubled area where British oil investments are threatened. Egypt has taken over control of the Suez Canal, the direct route for Britain-bound tankers (GSB Oct. 1, 1956).

In spite of these setbacks, the British have hauled their post-war production up by the bootstraps to surpass that of 1938. Exports have reached new heights. British cars hum along American roads, British textiles command high prices in New York stores, every schoolboy would like a British bicycle. American dollar aid and the drastic

AT London's Victoria Dock, lines of bright new British cars wait to board a freighter for export overseas. Passersby look at them longingly. With full employment and pockets that jingle despite inflation, many British people feel they can afford a new car themselves. But in the "tight little island," still finding its feet after the devastation of World War II, the export of products must come before the fulfillment of home demands.

If the British get a little impatient with their economic problems, they can blame them on

NICHOLAS HARDINGE

# Great Britain

## TRADE IS STILL ITS STRENGTH

geography. Great Britain, largest island in Europe, contains three main divisions: England, Scotland, Wales. Yet its area is less than the State of Oregon's. Mountains hump northern Scotland, then roll south like a spinal column (the Pennines) to pile up in Wales. The highest, Ben Nevis, rises only 4,406 feet. But these time-scarred hills are steep and rocky enough to limit the amount of farm land.

Great Britain lies on the latitude of wintry Labrador. But waters from the Gulf Stream wash its shores, giving it mild temperatures, a drizzly climate with a total rainfall about the same as New York's. The weather suits agriculture. Crops and livestock thrive in rich fenlands and undulating moors.

The trouble is, people flourish too, in this climate that they traditionally grumble about. More than 50,000,000 of them crowd Great Britain with an average density of about 570 to the square mile—more than ten times the population density of the United States. British farms and off-shore fisheries can feed less than half its people. The rest depend on food bought from other countries.

To pay for imported food, Britain became a world leader in manufacturing goods and selling them abroad. Resources of iron and coal gave the island a headstart in developing factories and mills back in the 18th and 19th centuries. But as demands for British products rose, native iron ore failed to meet them and had to be supplemented by imported ore. Oil, the life blood of machinery,

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N. C. WYETH

# COLUMBUS & HURRICANES

"THERE arose such a boistrous tempest . . . as hath not lately been heard of. It beat down to the bottom of the sea three ships which lay at anchor, and broke the cables in sunder."

Thus wrote a chronicler of Christopher Columbus's second voyage, 1494-95. He had set out with 17 ships and 1,000 colonists, had ridden out one tropical storm and managed to re-establish his colony of Isabella on the island of Hispaniola. This "boistrous tempest," nearly a year later, showed the Great Navigator the fiendish power of a West Indies hurricane.

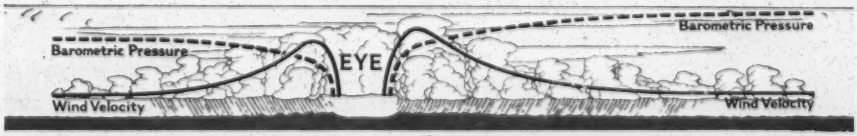
In 1502, on his fourth and last voyage to America, a raging storm overtook Columbus off Santo Domingo. Despite his warnings, a fleet of 30 vessels set sail—and only one reached Spain. The ships of storm-wise Columbus came through.

But suppose Columbus had met such a storm on his first, epoch-making voyage in 1492. Luckily, not until he was close to the Azores on his voyage home in 1493 did he come to grips with a storm believed to be the first hurricane recorded.

The Caribbean area is one of the three world regions that spawn these mighty storms. In the Southwest Pacific and Indian Ocean they are called typhoons. Sultry tropic air rises as though through an invisible chimney. Pressure drops and winds rush in from every direction. Earth's rotation gives them a twist. The storm becomes a great whirlpool of wind. At the center, the "eye" of calm air caused many an early navigator to believe he had weathered the storm, only to be hit in a short time by gales from the opposite direction.

It often takes all summer for enough heat to build up to incubate hurricanes, hence the storms with girls' names threaten at this time of year.

**HURRICANE'S EYE** gapes from writhing clouds below the wing of a storm-scouting plane




DRAWING BY IRVIN E. ALLEMAN



JOHN RANDAZZO

© JOHN TOPHAM

**A SPOT OF TEA warms Welsh hill folk, resting briefly amid keepsakes in a lonely home**

tightening of British belts helped bring about this economic resurgence. But new conditions blunt the edge of Britain's triumph.

Nations that once eagerly sought British goods are now frequently starting to make the same products in their own post-war factories. As they concentrate on building their own industries they often allow their agriculture to slack off, so they have fewer food surpluses to sell. And the British people themselves are demanding manufactures that should sell on the world market. Always optimistic, they feel justifiable pride in having survived war and austerity, in having actually improved many aspects of their standard of living. They want to celebrate—with a new car, for example. Past glories boost their confidence. The British devised the basis for democratic government, fashioned the jury system, explored seas, settled new lands, invented new machines, always expanding trade.

Now they hope that the British Commonwealth of Nations, one fourth the earth's land area, will absorb more and more British products, supply more and more food and resources, take more and more emigrants to ease Britain's pressure of population.—E.P.

EUROPEAN

**SNOW OFTEN visits Scotland where shepherds and their dogs drive flocks to bleak highland pastures**

DR. DONALD P. ABBOTT

**For three scientists**—an anthropologist, a marine biologist, and an ecologist—the summertime assignment to Ifalik was something to write home about. Their job was the fourth in a series of intensive atoll studies financed by the Geography Branch of the Office of Naval Research. Specifically, they would analyze the relationships between man and his environment under conditions uncomplicated by modern civilization. Their experiences and findings are related by Marston Bates, Ph.D., of the University of Michigan, in the April, 1956, *National Geographic Magazine*. They witnessed memorable sights. At lower right, the reef ringing Ifalik's lagoon is revealed by low tide, studded with coral formations. Even high tides don't bother Ifalikians much; waders pass through two or three feet of water in going from one islet to another. Star-navigating boatmen visit isles 100 miles away.

**Through sun-drenched,** happy days, Ifalik men loll in their nine canoe houses (one pictured at left), twisting coconut fibers into rope. In their "man's world," women cook, tend looms, and cultivate taro patches. For the men the dividing line between work and play "seemed to be all mixed up," Dr. Bates observed. But work, as we know it, sometimes drives them to communal roof repairing and cleaning up of grounds. Children of the moment, few of them fear their one great menace—the typhoon—even though a storm could scour their atoll, a mere 20 feet above sea level at highest point, and destroy all food if not their lives. But the last typhoon was in 1907, a faint memory of older islanders.

How long, storms aside, will this paradise last? Says Dr. Bates: These people "want to take their place in the world and I don't think we should protect them artificially . . . I have enough confidence in them to believe that they can teach us as many things about living as we can teach them."—S.H.

MARSTON BATES

MARSTON BATES

# Ifalik

## A Way of Life on a South Pacific Atoll

MARSTON BATES

DR. DONALD P. ABBOTT

**Garlanded,** quiet-eyed Gavileisei (above) knows navigation and canoe building, skills close to life in Ifalik. For the southwest Pacific's green-mantled paradise in Micronesia, the sapphire sea means the birthpace of winds, recreation, and, most important, food. The 260 inhabitants, sharing a land area of three-fifths of a square mile, eat sea animals but shun shark and octopus in the hope that these two won't eat them! To young and old, any day's delight is meal time, and any hour serves the purpose. As Americans talk baseball or business, everybody on Ifalik incessantly talks food. Happiness is thus expressed: "My belly is good." Satisfied faces of the woman and child (upper right) prove the point. Bronzed, knowledgeable fishermen (lower right) manipulate half a mile of net to satisfy the demand for a food to relieve the starchy diet of breadfruit and taro.

NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

**VERMONT'S State House, of native granite, dominates Montpelier's State Street, below**

with a yearning to return to the land. Artists, poets, writers, business executives, they are inspired by the elemental mountains, the down-to-earth honesty of mountain people. Farming is still the state's leading business. Maple syrup ranks as a profitable early spring product (Vermont leads the nation in supplying this nectar of the woodlot). But today Vermonters frankly agree that summer tourists and winter skiers bring in welcome dollars and new vitality.

VERMONT DEVELOPMENT COMMISSION

The rocks that discourage farming are themselves a natural resource for Vermont. It leads the United States in production of asbestos-bearing rock. Its quarries, especially around Barre, turn out slabs that fill a fifth of the nation's demand for monumental granite. It calls itself the marble state with good reason. Vermont marble helped build the Jefferson Me-



UMI

# Vermont

VERMONT DEVELOPMENT COMMISSION

VERMONT'S name comes from the French *verd mont*, or "green mountain." Yet the thrusting, tree-smothered hills that ridge this little New England state don't remain green for much of the year. In dead of winter, when four feet of snow chokes their steep slopes, they turn a bleak purple with mottled patches of white.

Now, in October, frosts already have touched mountainside maples. Banked hills cupping the small village of Plymouth, left, are splashed with blood red, streaked with flames of orange. Against these colors evergreens stand out in dark silhouette. Above such painted hills autumn's cold sky seems almost dark blue.

In such a setting Vermonters live out quiet, unobtrusive lives, placidly aware that hordes of Americans come to visit their state, to savor their contentment as well as the scenic views. From hamlets like this, native sons have set out to conquer the "outside world."

One was Calvin Coolidge, who took his Oath of Office as President in 1923 right here in Plymouth, where he was born. President Chester A. Arthur was another native Vermonter. So were Stephen A. Douglas, who debated with Lincoln, Thaddeus Stevens, political leader of the post-Civil War years, and Admiral Dewey, who seized Manila Bay from the Spanish Fleet in 1898.

It has been said that people are Vermont's most important product. They have the reputation of believing in hard work. Though modern ways have penetrated even the Green Mountains, Vermonters cannot entirely shake off the habits of generations of farmers who labored mightily to scratch a living from rocky soil.

Blessed as it is with scenery, Vermont is a rough land for ploughs. Average elevation is about 1,000 feet. Though bottomlands boast rich soil, crops grow thinly among hillside rocks. Early Vermonters grazed sheep on mountain pastures. Now dairy cattle have taken over. They outnumber the state's residents, and their milk helps feed Boston.

But scores of weathered farms were deserted when young men moved west to try their luck in richer loam. In many valleys twining through the Green Mountains battered old homesteads have been bought up by newcomers—city folks

the New Hampshire side. "I'm mighty grateful," he told his neighbors. "I couldn't have stood another of them Vermont winters."—E.P.

© BELL FAMILY

*"THE inventor is a man who looks around upon the world and is not contented with things as they are. He wants to improve whatever he sees, he wants to benefit the world; he is haunted by an idea, the spirit of invention possesses him, seeking materialization."*

CANADIAN MUSEUM HONORS . . .

# Alexander Graham Bell

ALEXANDER GRAHAM BELL, haunted by ideas and seized with the spirit of invention throughout his life, now is fittingly honored by a museum in Baddeck, Nova Scotia, where his benefits to the world are enshrined for all to see.

Most famous for his invention of the telephone, Dr. Bell was "not contented" with so many things that the heritage of his active mind indeed requires full museum space for display. For instance, early experiments with airplanes gave Bell the idea of applying the principles of powered flight to boats. He developed hydrofoils—thin, ladderlike strips of metal attached below the waterline to the hulls of experimental craft. He discovered that boats so equipped rose high on the foils as speed increased, thus freeing hulls from water resistance.

In 1918, Dr. Bell launched the *HD-4*, shown below in Gilbert Grosvenor's dramatic photograph during a speed trial. This 10,000-pound craft, powered by twin airplane engines, set a world speedboat record of 70.86 miles per hour in 1919—skimming over Baddeck Bay virtually out of the water.

After Bell's death in 1922, hydrofoil research in America languished, but now both United States and Canadian navies are developing this idea.



GILBERT GROSVENOR

UMI

NATIONAL GEOGRAPHIC PHOTOGRAPHER ROBERT F. SISSON

**MAPLE SAP is emptied from buckets to horse-drawn tank, then boiled down to syrup**

morial and the Supreme Court building in Washington, D. C., the United Nations building in New York.

With a Yankee knack for precision, Vermonters manufacture fine tools. A Brattleboro factory turns choice maple into church organs. Crafts flourish.

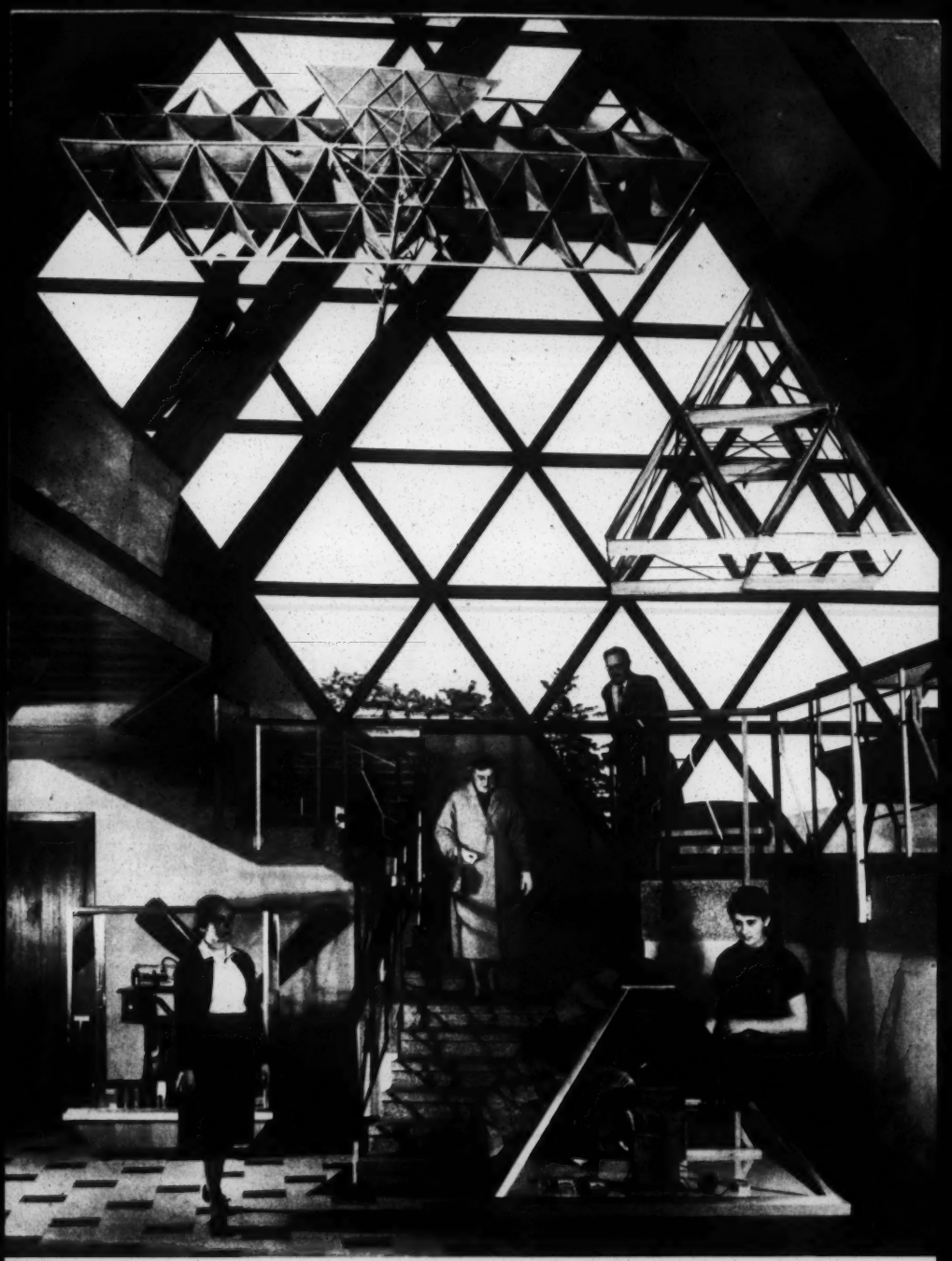
About two thirds of the population of some 378,000 live in rural areas. Only four towns can claim more than 10,000 people. Largest of these, Burlington (about 33,000), hugs the shore of Lake Champlain.

Down this long waterway, etched with fingerlike bays, Burgoyne's British and Hessian army struck in 1777, heading for the Hudson Valley. The Green Mountain Boys, trained by Ethan Allen and Seth Warner, fought them at Hubbardton, then joined New Hampshiremen to whip the enemy at Bennington.

At the time of the Battle of Bennington, Vermont had established itself as an independent republic with a written constitution, a postal system, an army. The little nation served its purpose by frustrating the claims of New York and assuring itself statehood. It joined the Union in 1791—the 14th state.

Besides Ethan Allen and maple syrup, Vermont is famous for its winters. Though Vermonters will stoutly defend their climate in front of outsiders, maintaining that winter is only chilly enough to produce the bloom of good health (which it does) they recognize its rigors. Barns adjoin houses so men can reach them without shoveling through deep snow in below zero temperatures.

Among themselves, Vermonters joke about their seasons: "Ten months of winter and two of tough sleddin'." They'll tell the story of the farmer who lived on the Connecticut River in the days before dams checked its springtime floods. One May he watched the torrent carve a new channel that would place him on the New Hampshire side. "I'm mighty grateful," he told his neighbors. "I couldn't have stood another of them Vermont winters."—E.P.



NATIONAL GEOGRAPHIC PHOTOGRAPHER WILLARD R. CULVER

**TETRAHEDRAL DESIGN, used by Alexander Graham Bell in 50-year-old kites (top) is reflected in window and architectural style of the new museum housing them near the American inventor's summer home at Baddeck, Nova Scotia. Near here, as well as in Washington, D. C., many of Dr. Bell's experiments were carried on. In the August, 1956, *National Geographic Magazine*, an article by the Honourable Jean Lesage, Canadian cabinet member, describes this memorial and the great mind it honors.**